COTTON, SHIRES AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

January 19, 2016
G0058

EMPRISE TRUST
T. Felkay, Trustee
1925 El Camino de la Luz
Santa Barbara, California 93109

SUBJECT: Supplemental Geotechnical and Hydrologic Responses to City of Santa Barbara Planning Division Information Request of January 14, 2016
RE: 1925 El Camino de la Luz Residential Reuse Project
MST#2013-00240, APN: 045-100-024

Dear Emprise Trust and Mr. Felkay:

Cotton, Shires and Associates, Inc. (CSA) is providing the Emprise Trust with this letter providing our supplemental geotechnical and hydrologic responses to three of the additional information requests by Ms. Kathy Kennedy of the City of Santa Barbara Community Development Department-Planning Division in an email dated January 14, 2016 to your counsel Richard Monk, Esq. regarding the above-referenced project. In this response letter, we first state the City staff information requests in *italics*, followed by our responses in plain text.

1. *Can you provide the estimated tons of landfill debris to be removed from the site? Please note that the County threshold is 350 tons of construction/demo debris.*

1. Response

When the site was cleared of residential structures by the City following the 1978 El Camino de la Luz landslide, we estimate that approximately 100 cubic yards or 140 tons of structural debris materials were probably left in place or buried on the parcel where it was impacted by the landslide. During the balanced grading (1,175 cubic yards of cut and fill) for the proposed residential reuse project on the parcel, this 1978 landslide structural debris will be off-hauled and disposed of at a permitted landfill outside the coastal zone and the clean earthen landslide material within the project grading envelope will be used for engineered fill as shown on the project grading plans. In any case, we expect the amount of construction debris (including any horticultural vegetation and associated roots from surface stripping, estimated at less than 10 tons) that needs to be off-hauled from the site to be well below the County threshold of 350 tons.

We base our estimate of structural debris on the following: (a) observations of in-situ conditions in 2008-2015, which have revealed daylighted relict concrete pieces, of various sizes, and other structural debris in the City's grading envelope at 1925 and 1921 El Camino de la Luz; (b) the City-approved building plans for the single-family residence on the parcel at 1925 El Camino de la Luz between 1956 and the 1978 El Camino de la Luz landslide (Permit F-3833, November 22, 1955), which provide

information about the types and volumes of construction materials used by the 1955-1956 developer/builder of the house and appurtenances; (c) the South Central Coast Regional Coastal Commission-approved coastal development (1978) for City landslide structural debris removal; and (d) the description by the contemporaneous neighbor at 1919 El Camino de la Luz of the debris grading by the City contractor and prison laborers of "concrete, lumber, roofing materials, flooring, plumbing, and electrical components" at 1921 and 1925 El Camino de la Luz (Douglas and Doris Crawford letter to the City, September 4, 2007). Near-vertical and oblique aerial photographic imagery (Weaver/Pacific Materials Laboratory, Inc., 1978), at-grade imagery (1974-1984, City of Santa Barbara Public Records Act Production to Dall & Associates, 2009), aerial photography of the City grading and adjacent 1978 El Camino de la Luz landslide envelopes (September 20, 1978), and City topographic map sheet C-8-729 (September 29, 1978) further contributed information for our estimate of the kinds and volume of pre-1978 landslide house and appurtenant structural materials that the City buried beneath its graded earthen cover on the parcel.

2. *Please confirm the location of the areas considered stable and unstable. In the January 5, 2016 CSA letter, page 2 & 3, it states that the pink areas are considered unstable and all areas above the pink areas are considered stable without the use of slope stability devices. Is this correct?*

2. Response

The pink area on our engineering geologic map (Attachment 1 to this letter) represents the surface expression of the remaining portion of the 1978 ECDLL landslide on the slope for which we are considering the factor of safety is currently at or near unity for design purposes. Any area upslope of the pink area has a factor of safety greater than unity, which is technically stable, but not stable enough to meet industry standards for new development without stabilization measures. As discussed in our geotechnical investigation report (CSA 2012), the primary engineering geologic constraint at this site is the 'dip slope' bedrock condition, which provides the potential for shallow to moderately deep landsliding to occur in bedrock along weak bedding planes. This dip slope condition results in the southern through central portion of the site having a static safety factor of less than 1.5 (and/or seismic factor of safety of less than 1.1). It should be noted that this condition extends upslope to include the City's Mesa Trunk Line Sewer and a portion of the driveway upslope of the sewer (see Attachment 1 and Attachment 2 to this letter). For new residential development of these portions of the parcel, mechanical, drainage and/or grading improvements are required to achieve a static Safety Factor equal to or greater than 1.5 and seismic factor of safety equal to or greater than 1.1.

Based on slope stability analyses conducted as part of our investigation culminating in our geotechnical report (CSA, 2012), as well as observations made from our subsurface exploration (including a soft clay seam [bedding feature] at a depth of 16 feet in boring CSA/LD-2 – see Attachment 2), the area requiring stabilization measures for safe new and appurtenant development includes the 1925 ECDLL proposed development envelope, as shown on the project site plan (ABDS, 2015), up to the dividing line shown on the driveway on Attachment 1 (Annotated Map [base previously Figure 5, Site Plan and Geologic Map, of the CSA 2012 geotechnical report]) and Attachment 2 (Annotated Cross Section [previously Figure 6, Engineering Geologic

Cross Section A-A', of the CSA 2012 geotechnical report]) to this letter. Consequently, our response on pages 2 and 3 of our January 5, 2016 letter should be deemed clarified accordingly.

3. *Some issues that may need to be discussed further with Building & Safety: The storm water storage tank/pool will need to be discharged to the sewer drain rather than storm drain per City ordinance (SBMC Section 16.15.010). Drainage is not allowed to be piped to an adjacent property.*

3. Response

Because the proposed Ultra Violet Light (rather than chemical) treatment of detained water in Water Storage Tank 3 (WST-3) will neither alter the chemistry of the water nor introduce any waste, contamination, or pollutant into the water, combined with the reference in the preamble of this code section to "Waste, Medical Waste, Contamination or Pollution or other substance which impairs the quality of the drainage" as it applies to "any water for swimming pools" in sub-part 16.15.040.K, it appears that this requirement is intended to apply to any swimming pool that, e.g., utilizes chemicals to treat its water, rather than to the ULV-treated water that will be present in WST-3. Thus, while the project proposes beneficial reuse of WST-3 as a lap pool, episodic pumped discharge of detained water from WST-3 to the City storm drain in El Camino de la Luz constitutes the last of the sequenced discharges of retained/detained storm water in the SWMS protocol and, on those occasions when it is pumped to the City storm drain, will not impair the water quality of this drainage in terms of the criteria for its protection set forth in City of Santa Barbara Municipal Code section 16.15.040. However, if the City's Building and Safety Division's determination, on further consideration in light of this response, were to be that harmonized Santa Barbara Municipal Code Title 16, Liquid and Industrial Waste Disposal, requires UVL-treated water from WST-3 to be discharged to the municipal wastewater collection system, this project component can be accordingly revised to provide, and the project construction drawings revised to depict, that the relevant pumped discharge pipe connect to the applicable sanitary sewer system.

The City staff comment that "Drainage is not allowed to be piped to an adjacent property" is not supported by a reference to the City Municipal Code, and thus is not clear. In fact, the City (1978) after the 1978 El Camino de la Luz landslide hydro-modified the overland flow that enters the existing parcel driveway area (Sub-Catchments 3 and 4 in our hydrology study) from adjacent 1927 and 1929 El Camino de la Luz to discharge storm water by a combination of barriers and conveyances (V-ditch, overland flow on concrete and semi-permeable surfaces) to adjacent 1921 El Camino de la Luz. That local drainage system has been in place for over 37 years and the proposed residential reuse project SWMS essentially maintains this drainage, albeit with BMPs that enhance the quality of the storm water runoff before it discharges to the established system.

If the City Community Development Department's determination, on further consideration in light of this response, were to be that the City's (1978) stormwater discharge system installed on 1925 El Camino de la Luz is now invalid, WST-1 can be enlarged to accommodate the 25-year design storm event runoff volumes from Sub-Catchments 3 and 4.

Limitations

Our services consist of professional opinions formulated in accordance with generally accepted geologic, geotechnical and civil engineering principles and practices. No warranty, expressed or implied, or merchantability or fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings.

We trust that this provides you with the information that you need at this time. If you have any questions, or need additional information, please contact us.

Very truly yours,

COTTON, SHIRES AND ASSOCIATES, INC.

Patrick O. Shires
Senior Principal Civil and Geotechnical Engineer
RCE 26397, GE 770

POS:st

Attachments: Attachments 1 and 2

ATTACHMENT 1 - ANNOTATED MAP

DRAFT

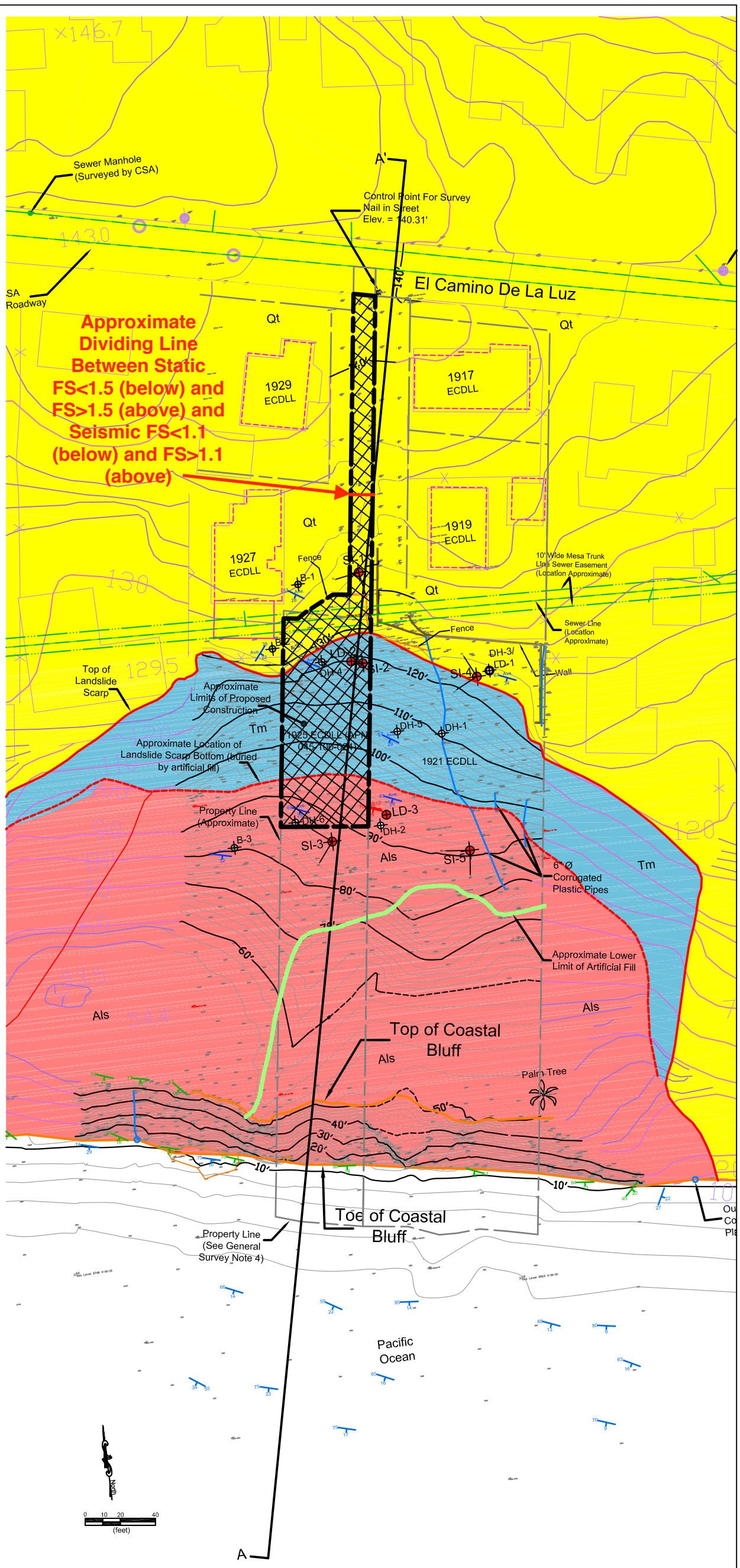
EXPLANATION

Earth Materials

- Qt — Quaternary Terrace Deposits
- Tm — Monterey Formation
- Als — Active Landslide

Map Symbols

- SI-5 — Small-diameter boring with inclinometer casing and piezometers installed by Cotton, Shires and Associates, Inc. in May 2011
- LD-3 — Large-diameter boring drilled and logged by Cotton, Shires and Associates, Inc. in October 2011
- DH-6 — Large-diameter boring drilled by Padre Associates, Inc. in September 2005 (DH-1 and DH-2) and June 2006 (DH-3 through DH-6)
- B-3 — Large-diameter boring drilled by Campbell Geo, Inc. in December 2006
- Stratigraphic bedding orientations collected by Cotton, Shires and Associates, Inc.
- Average stratigraphic bedding orientations collected during the logging of large-diameter borings
- Bedding orientation on landslide basal rupture surface collected in large-diameter boring
- 70′ — CSA 10' Contour
- CSA 2' Contour
- CSA 10' Contour (Approximate)
- CSA 2' Contour (Approximate)
- CSA Survey Point
- 60 — City of Santa Barbara 10' Contour
- City of Santa Barbara 2' Contour
- All Lines of This Color Indicate Features From City of Santa Barbara Map, Including, but not Limited to: Houses, Fences, Roads, Vegetation and Power Poles



SURVEY LIMITATIONS NOTES

1. This is not a map of a boundary survey. No property corners have been set as part of this work.
2. Survey monuments found in the course of this mapping are set by others, and have been used only as a reference for the purpose of topographic mapping, without our verification of their agreement with applicable legal descriptions and seniority of deeds.
3. Relation of topographic features (i.e., fences, walls, trees, power poles, etc.) to property lines as shown on this map is subject to the adjustments that a boundary survey may require.
4. This survey was prepared without the benefit of a Title Report. Easements, if shown, should be considered approximate in location.
5. If this map is provided in an electronic format as a courtesy to client, delivery of the electronic CAD file does not constitute delivery of a professional work product. The signed paper print delivered with this electronic CAD file constitutes our professional work product and, in the event the electronic CAD file is altered, the print must be referred to for the original and correct survey information. We shall not be responsible for any modifications made to the electronic CAD file or for any products derived from the electronic CAD file which are not reviewed, signed and sealed by us.

General Survey Notes

1) All dashed lines on this map represent features (houses, walls, topography, etc.) that have not been surveyed by Cotton, Shires and Associates and are approximate only.

2. Vertical Datum for CSA topography based on NOAA published value for mean lower low water (MLLW) in Santa Barbara.

3. City of Santa Barbara topography and features taken from map dated 4/10/95 (Revised April 1997) from County of Santa Barbara website (http://www.countyofsb.org/pwd/water/TopoFloodControl1.htm).

4. Southern property lines are based on the MHTL elevation of 4.63 feet above MLLW (MHTL from David Skelly, GeoSoils, Inc., "Wave Runup & Coastal Hazard Analysis, 1921 El Camino de la Luz & 1925 Camino de la Luz, Santa Barbara, Santa Barbara County, California").

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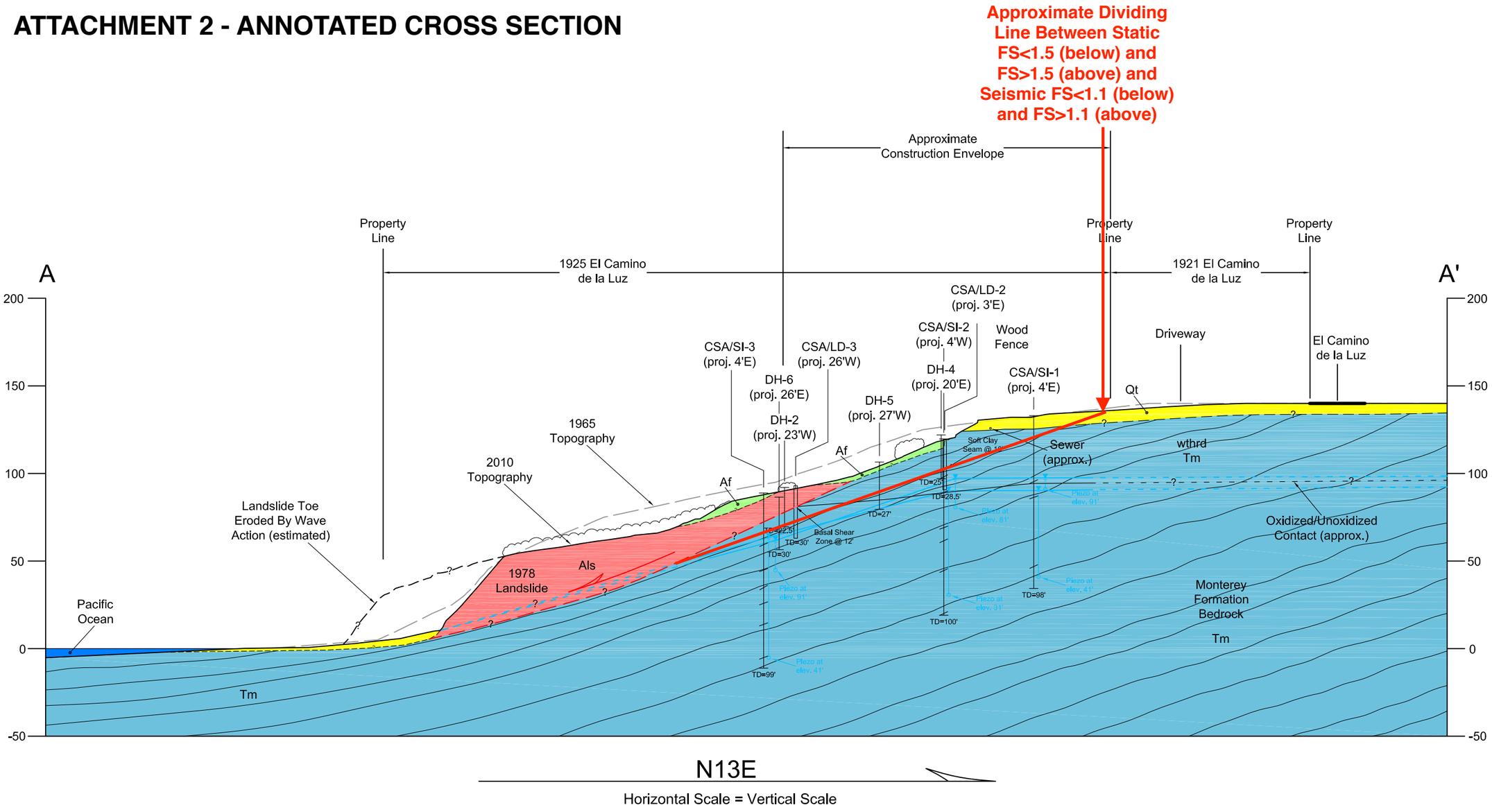
CONSULTING ENGINEERS AND GEOLOGISTS

Site Plan and Geologic Map
1925 El Camino De La Luz
APN:045-100-024
SANTA BARBARA, CALIFORNIA

GEO/ENG BY	SCALE	PROJECT NO.
AM/TPS	1"= 60'	G0058
APPROVED BY	DATE	FIGURE NO.
JW	OCTOBER 2012	5

ATTACHMENT 2 - ANNOTATED CROSS SECTION



N13E

Horizontal Scale = Vertical Scale

COTTON, SHIRES AND ASSOCIATES, INC.
CONSULTING ENGINEERS AND GEOLOGISTS

Engineering Geologic Cross Section A-A'
1925 El Camino De La Luz
APN:045-100-024
SANTA BARBARA, CALIFORNIA

GEO/ENG BY	SCALE	PROJECT NO.
JD	1"= 60'	G0058
APPROVED BY	DATE	FIGURE NO.
JW	OCTOBER 2012	6